



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor
Robert L. Morgan
Executive Director
Lowell P. Braxton
Division Director

1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
(801) 538-5340 telephone
(801) 359-3940 fax
(801) 538-7223 TTY
www.nr.utah.gov

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TO: Internal Files

FROM: Peter Hess, Sr. Reclamation Specialist/Engineering, Team Lead *PH*

RE: Amendment to Remove Straw Bales from BTCA Area, Energy West Mining Company, Trail Mountain Mine, C/015/009-AM02A *(PacifiCorp)*

SUMMARY:

The permittee is proposing to revise the methods used to provide the sediment control for the alternate sediment control area designated in the mining and reclamation plan as "BTCA" area one, which is located just south of the mine site sediment pond. The currently approved method of treatment for the 0.21 acres involved is a straw bale dike.

OPERATION PLAN

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

Surface Water Monitoring

The permittee has not requested a reduction in the number of surface water monitoring locations near the BTCA or downstream from it. Stream monitoring location SW-2 is located adjacent to this area; SW-3 is located approximately two miles below the mine above the confluence of Cottonwood Canyon and Straight Canyon. If TSS levels increase upon removal of the straw bales, accurate monitoring methods remain in place to inform the permittee as well as the Division that a problem does exist.

TECHNICAL MEMO

As indicated in Volume 2, Chapter 7, Table 7-3, 3 of 3, both SW-2, and SW-3 are monitored on a quarterly basis, utilizing all required surface water monitoring parameters.

A review of information contained in the Division's electronic water monitoring database as it relates to total suspended solids and flow for SW-2 and SW-3 indicates the following:

- 1) The majority of the provided data was collected at flow volumes less than or equal to 1500 GPM.
- 2) At SW-2, flow volumes less than 1500 GPM consistently report TSS levels less than 150 mg/l.
- 3) At SW-3, flow volumes less than 1500 GPM consistently reported TSS levels less than 150 mg/l. Suspended solids concentrations vary proportionately with flow rate.

Thus, we have historic information in place that indicates consistent levels of TSS relative to flow volumes. If TSS levels start to climb higher than what should normally be expected relative to flow, then a re-evaluation of this BTCA area adjacent to the Cottonwood Canyon Creek would be necessary.

Sediment Control Measures

The currently approved mining and reclamation plan for the Trail Mountain Mine discusses the two "BTCA" areas at the site in HYDROLOGY, page 7-38. The permittee has submitted a proposed revision to page 7-38 in a highlighted / strike out version. As noted in the currently approved plan, the area consists of 0.21 acres and is located just south of the sediment pond. The runoff calculated from the 10 year 24 hour design event has been determined to be 0.013 acre-feet. This volume currently reports to a dike that is constructed of approximately six or seven straw bales placed end to end on the Cottonwood Creek embankment on the opposite side of the County road. The area was inspected in July of 2002 and photo documentation was made. The area is well vegetated, and where vegetation does not exist, litter in the form of leaves, twigs and branches serves to reduce rain drop impact. Rock litter of various sizes also exists in the area to reduce raindrop impact. There was no visual evidence of erosion, or of sediment deposition near the undisturbed drainage, Cottonwood Canyon Creek.

Findings:

The submitted information is adequate to meet the requirements of the R645 coal rules.

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

Analysis:

Mining Facilities Maps

The permittee has submitted map revisions for the plates designated as PLATE 3-1, *TMS1362D, TRAIL MOUNTAIN MINE SURFACE FACILITIES*, and PLATE 7-5, *TMS1371D, TRAIL MOUNTAIN MINE DRAINAGE CONTROLS*.

The revised plates depict an additional area of cross-hatching (180 feet long and 25 feet wide, or 1/10 of an acre) located immediately down channel of what is currently depicted on the approved maps. Some confusion has been created by this additional cross-hatching for the following reasons:

- 1) The new addition of cross-hatching is identical to the cross hatching used to depict riprap that is shown within the disturbed area perimeter. An examination of the channel on 8/20/2002 revealed that no riprap exists in the field for the area which is depicted, (i.e., there is no gradation of material in the channel, nor has the material been placed, and/or distributed). The channel bottom, as it exists in the field, consists of earth material, and not "riprap". The rock that does exist appears to have been naturally placed, as it is sporadic regarding its location and gradation.
- 2) The area of the BTCA watershed that reports to the "in-place" straw bales is not depicted (i.e., is not outlined on either of the revised Plates).
- 3) The sediment control previously designated as straw bales for the area described on Page 7-38 in the plan is being changed to vegetation, riprap and litter. There is no notation on either revised Plate 3-1 or 7-5 (Drainage Controls) which depict or notify a reviewer that the new sediment control method for this area is vegetation and litter. There are no straw bales depicted on the current, approved map.

As indicated in Table 1, Permitting Standards for alternate sediment controls and small area exemption areas, Tech Directive 003A, ASCA's, [or areas using "best technology currently available", (BTCA's)], runoff and sediment control methods are required to be shown on an appropriate map which is a part of the approved mining and reclamation plan. The map (or drawing) is an essential part of the "design" required by R645-301-742.230. **This has not been done** on either Plate 7-5, Trail Mountain Mine Drainage Controls, or Plate 3-1, which is the surface facilities map. All other permitting requirements for alternate sediment controls have been addressed with the aforementioned exception.

TECHNICAL MEMO

During the site visit conducted on August 8, 2002, the permittee indicated that a revision to the treatment controls in the "BTCA" on the north end of the Trail Mountain parking lot was desirable. That treatment change would be to remove the silt fence that parallels the cyclone fence perimeter, and thus rely only upon vegetation and the riprap that is in place. Photographs were taken of the area on 8/08/2002, and these are on file in the "O" drive, C/015/009, Image, 08082002. Vegetation in the area appears to be adequate to allow this removal. The in-place fence treats the outslope of the fill which was built as a part of the parking lot area. The riprap which is in place on the outslope is well placed and shows size gradation. As noted in the analysis section of **SURFACE WATER MONITORING** in this document, monitoring points SW-2 and SW-3 remain as a part of the approved water-monitoring plan. An increase of total suspended solids will be easily detectable by comparing future TSS levels with the current history of those levels at the two monitoring points.

The revised Plates 3-1 (Surface Facilities) and 7-5 (Drainage Controls) do not reflect this change (i.e., the silt fence is still depicted on both of the "revised" Plates). The submittal received 8/08/2002 does not reflect the change, because this latest change was not aired in the field until that day. Therefore, since the permittee desires to remove this method of treatment, all proposed revisions relative to the "BTCA" areas at the Trail Mountain site should be submitted with the next submittal.

Findings:

The permittee must address the deficiency as found within this Technical Analysis and provide the following, prior to approval, in accordance with the requirements of:

R645-301-731 & R645-301-512.240, The maps provided as part of the submittal are not adequate to meet the minimum regulatory requirements of the R645 coal rules. Same are inaccurate, in that they do not reflect current field conditions nor do they accurately reflect treatment methods in the areas being evaluated.

RECOMMENDATIONS:

The permittee must submit revised maps that accurately reflect the treatments, the watershed areas, etc., as well as revised text to address all of the changes that are requested.